



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,991	07/15/2003	Dirk Emiel Paula Mestach	ANR 2950 US	8784
7590	03/30/2005		EXAMINER	
Michelle J. Burke Akzo Nobel Inc. Intellectual Property Dept. 7 Livingstone Avenue Dobbs Ferry, NY 10522			ZALUKAEVA, TATYANA	
			ART UNIT	PAPER NUMBER
			1713	
			DATE MAILED: 03/30/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,991	MESTACH ET AL.	
	Examiner Tatyana Zalukaeva	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 January 2005.
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-20 and 22-35 is/are rejected.

7) Claim(s) 21 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date .

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10-19, 26-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is indefinite if undue experimentation is involved to determine boundaries of protection. This rationale is applicable to polymer "obtainable" by a stated process because any variation in any parameter within the scope of the claimed process would change the polymer produced. One who made or used a polymer made by a process other than the process cited in the claim would have to produce a polymer using all possible parameters within the scope of the claim, and then extensively analyze each product to determine if this polymer was obtainable by a process within the scope of the claimed process. Consult Ex parte Tanksley, 26 USPQ 2d 1389

3. Applicants are advised that no election/restriction was imposed at this time, however if further amended or new claims are introduced, such requirement may be imposed at any stage of the prosecution.

Specification

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code on page 4, lines 3, 4. Applicant is required to

delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 7, 10- 14, 16, 21, 23, 24, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Yutani et al (U.S. 5,439,980).

With regard to claims 1 and 2, Yutani discloses a method of degenerative iodine chain transfer polymerization , where in polymer chain is produced by polymerizing, in the presence of a radical generating source and an iodide compound of at least one monomer M1 having a radically polymerizable unsaturated bond between a carbon atom and an iodine atom constituting a carbon-iodine bond of the iodide compound to form at least one polymer chain between the carbon atom and the iodine atom, wherein the polymerization reaction is carried out in the presence of a monomer M2 which is different from the monomer M1 and has a larger addition reactivity with a carbon radical which is generated by cleavage of the carbon-iodine bond of the iodine compound than that of the monomer M1 (abstract).

An intermediate polymer of Yutani is disclosed in Example 3, lines 40-45, wherein in the first step the MMA was polymerized in the presence of AIBN and iodine chain transfer agent, and the second step is further described in lines 46-55, wherein

the iodine containing intermediate polymer of the previous step was polymerized with additional MMA in the presence of AIBN.

With regard to claims 2, 20, 22, the claimed limitation will be inherently met, since it is axiomatic that one who performs the steps of a process must necessarily produce all of its advantages. Mere recitation of a newly discovered property or function that is inherently possessed by the things or steps in the prior art does not cause a claim drawn to those things to distinguish over the prior art *Leinoff v. Louis Milona & Sons, Inc.* 220 USPQ 845 (CAFC 1984). The polymerization process is performed at 70°C (col.13, line 5, etc.). The molecular weight of resulting polymer is 1,000 to 4,000,000 (col. 7, lines 12-14). With regard to claims 7 and 16 Yutani discloses the use of glycidyl acrylate and glycidyl methacrylate monomers for his process. (see col.5, line 24). These are epoxide compounds, specifically named in the instant specification.

It is noted that Yutani is particularly concerned with production of block copolymers (see Fig. 8, examples 5, 6, 9,10). This meets the limitations of preamble for all of the instant claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 26-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yutani. The above claims are product by-process claims, wherein the patentability of the product is defined by the product *per se*, not by the process of its making, see *In re Thorpe*, 227 USPQ 964 (CAFC 1985) the Examiner rejected product-by-process claims over a product, which although prepared in a different manner, appeared to be the same (*prima facie*) as the claimed product.

Consult also *In re Brown*, 173 USPQ 685 (CCPA 1972), the Court of Customs and Patent Appeals (CCPA) explicitly approved the 102/103 rejection of a product-by-process claim over a reference which showed a product which appeared to be identical or only slightly different from the claimed product.

Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicants' burden to prove that an unobvious difference exists. See In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983).

See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner. With regard to preambles to claims 27-30, and 32-35, the polymers of Yutani are essentially identical to the claimed polymers, and are, therefore, fully capable of being each and every composition as claimed.

9. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yutani. Yutani discloses polymerization temperature of 70°C (col.13, line 5, etc.).. The instant claims 6 and 15 call for temperature lower than 70°C. It is settled by the Court that a *prima facie* case of obviousness exists when the claimed range and the prior art range do not overlap, but are close enough, such that one skilled in the art would have expected them to have the same properties, *Titanium Metals Corp. v. Banner*, 778 F.2d 775,783,227 USPQ 773,779 (Fed. Cir. 1985)

10. Claims 8, 9, 17, 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Yutani. The mole ratio of epoxide to iodine chain transfer is not elucidated in Yutani. However, it would have been within the skill of those skilled in the art to adjust this ratio

via routine experimentation to achieve optimum molecular weight and polydispersity and thus to arrive at the instant claims.

Allowable Subject Matter

11. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest that sulfonyl iodide compounds can be used for DIT process. Nor does the prior art teach that sulfonyl iodide compounds per se are used as chain transfer agents. However, claim 1 should be amended in order to positively recite sulfonyl iodide as a chain transfer agent, not as an option, as now presented in claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

March 24, 2005

